

BRIEFING NOTE: DREDGING

This briefing note sets out The Inland Waterways Association's views on dredging. Along with other essential maintenance to the inland waterways, IWA considers that dredging navigable waterways to a sufficient depth is an important function of navigation authorities.

There are many sections of waterway around the country that IWA considers are in urgent need of dredging, simply due to dredging not having been carried out for many years. Navigation authorities should prioritise funding so the backlog of dredging can be undertaken.

There are also places that require dredging regularly, for example after the winter floods where silt gets washed in by rivers and streams. These should be included and budgeted for in navigation authorities' programme of works on an annual basis.

Background and Current Situation

Whilst IWA welcomed the announcement by Canal & River Trust (CRT) in November 2012 that it would increase spending on dredging over the next ten years, IWA is concerned that there remain certain waterways that are now so silted that boaters are experiencing significant difficulties. There have been recent reports of boaters choosing not to visit, or not to continue along the whole length, of certain waterways, such as the Caldon Canal, due to the lack of navigable depth of water.

Dredging to full channel profile

IWA considers that whenever dredging is undertaken on most waterways, the full constructed channel profile should be recovered, subject to local engineering constraints. IWA accepts, however, that there are some instances that the best use of limited resources may not be to dredge to full original profile (e.g., on river navigations prone to annual winter sediment drops from flooding, and commercial waterways where there is no prospect of use by large craft that the waterway was designed for). Whilst spot dredging may speedily resolve urgent problems, it is considered an inefficient use of resources, and should be the exception rather than the rule.

Dredging should be required as soon as the depth in any part of the channel, landings, wharves, or moorings has degraded to less than the draught of vessel the waterway was designed for.

In slack water lengths (e.g., canals and some canalised sections of river navigations), the minimum dimensions of the channel required to accommodate craft of gauge beam B and gauge draught D are:

- Depth of fairway: $D + 20\%$ or 0.3 m, whichever is greater.
- Width of fairway: $2.1 \times B$ or 6 m, whichever is greater.
- Depth at landings, wharves, and moorings: $D + 0.2$ m.
- Depth at other banks: At 1.0 m from every bank, or where there is a bank-side vegetation fringe at the waterside of that fringe, no less than 0.6 m. Where protection is installed on the towpath bank, the depth at this bank shall be the depth the protection was designed to make possible. The depth at the non-towpath bank shall be deep enough to achieve the required fairway dimensions.

These dimensions will need to be increased in river sections, and other sections with significant flow, to allow for the effects of current and changing water levels.

In lengths where the channel is not restricted by structures or other local features, the ratio of the water cross section to the wetted cross section of a craft of craft gauge should be no less than 3.5:1 as an absolute minimum for short lengths, but 6:1 or greater is preferred, to reduce erosion and adverse effects on fringes of vegetation.

On tidal navigations and sections of river navigations not covered above, including those that may have no constructed gauge, channel maintenance specifications should be derived for each waterway, in consultation with users, so as to facilitate safe and efficient navigation.

In all cases, fairway width on bends should be increased as necessary to ensure that two vessels of craft gauge can pass safely.

IWA acknowledges the high cost of dredging, particularly on certain canals where environmental considerations require that any contaminated spoil is removed (and the additional costs for associated permissions and transportation) but would encourage navigation authorities to prioritise as much resources as possible to this important function.

More detailed guidance can be found in the policy on [Standards for Construction, Restoration and Maintenance of Inland Waterways](#).